IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Nirmal Mulye	**Examiner:**	Nissa M. Westerberg
Serial No.:	10/800,984	**Art Unit:**	1618
Filed:	March 15, 2004	**Docket:**	14276
For:	PROCESS FOR PREPARING SUSTAINED RELEASE TABLETS		
Confirmation No:	2376	**Dated:**	

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.132 OF NIRMAL MULYE, Ph.D.

I, Nirmal Mulye, declare as follows:

1. I have a Ph.D. in Pharmaceutical Sciences from Temple University awarded in 1992 and have worked in the field of formulations and pharmaceutical sciences for over twenty-five years. I am the inventor of the invention captioned above.

2. I have reviewed the rejections in the office action of May 20, 2011, and the advisory action issued October 3, 2011 in this case.

3. The Examiner states that the drug and polymer disclosed in U.S. Patent No. 6,340,475 ("Shell"), when compressed into pellets, reads on the mixture in the core required by my invention. Page 3 of the May 20, 2011 office action.

4. The Examiner concedes that Shell does not disclose the inclusion of maltodextrin, (id., bottom page 3) but the Examiner cites U.S. Patent No. 6,387,403 ("Seroff") which discloses dosage forms in which a drug is mixed with excipients that provide an osmotic activity gradient

to form a deliverable drug formulation by imbibition. *Id.*, page 4 top. Seroff discloses that maltodextrin can be used alone or in combination with other "osmagents." *Id.*, page 4 middle.

5. The Examiner then alleges that the combination of Shell and Seroff render my invention obvious:

> The person of ordinary skill would have been motivated to make those modifications and reasonably would have expected success because both Shell et al. and Seroff et al. teach drug delivery devices that are driven by the imbibition of water from the external environment into the drug delivery device.

6. Contrary to the Examiner's assertion, my invention does not rely on imbibition of water from the environment, or water-swellability for the release of drug from my inventive tablets. Rather, my invention relies on a controlled release polymer (sustained release carrier), such as hydroxy-propyl-methylcellulose (HPMC) to control the release of the drug. Any swellability of a polymer such as HPMC is not a significant factor in the release of the drug in my invention. In fact, many workers in this field would not term HPMC as a swellable polymer.

7. My invention further requires a water insoluble or partially water insoluble cellulose, for example silicified microcrystalline cellulose (SMCC), and maltodextrin, mixed with the drug and control release polymer and drug into a homogenous mass that forms a tablet or the core of a tablet.

8. The water insoluble or partially water insoluble cellulose serves two functional purposes in my invention. In one purpose, it is a valuable tableting aid that is a compressible material and gives tablets desirable physical characteristics, such as hardness.

9. In the other purpose, the water insoluble or partially water insoluble cellulose is a release promoting agent that accelerates the release of the active material from the formulation.

10. However, the combination of a drug, a control release polymer, and a water insoluble or partially water insoluble cellulose did not make a satisfactory tablet. I found that the tablets so formed had inconsistent dissolution behavior and could result in "dose dumping," which is not desirable for a controlled release dosage form.

11. The problem in the foregoing paragraph was solved with the use of maltodextrin, which is a water soluble material that acts like a glue to hold the particles of the water insoluble or partially water insoluble cellulose intact. Thus, the mixture of drug, a control release polymer, a water insoluble or partially water insoluble cellulose, and maltodextrin made a highly satisfactory sustained release tablet, as shown by the data provided in the specification.

12. Thus, the overall release profile of the drug in my invention depends on the balance between the control release polymer, the water insoluble or partially water insoluble cellulose, and maltodextrin.

13. This balanced release effect is based on the chemical interactions of these three materials and the solvent, and not on the physical changes, such as swelling in an aqueous environment.

14. I want to particularly emphasize that my invention is not an osmotic pump, and does not rely on an osmotic gradient, or swelling on imbibition of water, to control the rate of release of the drug.

I hereby declare that all statements made herein of our knowledge are true, that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001, of Title 18, of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date:

Respectfully submitted,

Nirmal Mulye, Ph.D